

Flood Risk Assessment

**Red Doles Lane Building Erection of Mobility Aid charging Shelter and
additional Parking**

Date: 01st October 2021

1.0 Site Information

The proposed development is located at Red Doles Lane, Huddersfield, HD2 1YF and is currently used for warehousing and offices.

The proposed development site lies within Flood Zone 2 and therefore a Flood Risk Assessment is required.

2.0 Proposed Development

The development proposals for the above site are to provide a 'garage style' outbuilding to be used for daily storage and charging of mobility aids belonging to disabled employees. The proposal includes for 2no additional disabled parking spaces adjacent to the outbuilding. The proposal constitutes a reasonable adjustment under the Equality Act 2010, to allow existing disabled employees to work at the site.

The lifetime of the proposal is assumed to be 60 years.

3.0 Assessing Flood Risk

The Environment Agency Flood Map created 30th Sept 2021 identifies the development site as being in Flood Zone 2. See appendix – Copy of Environment Agency Flood Map.

Table 1: Flood Zones of the Planning Practice Guidance identifies Flood Zone 2 as Medium Probability.

'Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. (Land shown in light blue on the Flood Map)'

Table 2: Flood risk vulnerability classification of the Planning Practice Guidance identifies less vulnerable sites as:

'Buildings used for shops; financial, professional and other services; restaurants, cafes and hot food takeaways; offices; general industry, storage and distribution; non-residential institutions not included in the 'more vulnerable' class; and assembly and leisure.

Therefore, the assessment of the development site is: less vulnerable/Flood zone 2

Table 3: Flood risk vulnerability and flood zone compatibility of the Planning Practice Guidance identifies a less vulnerable development in Flood Zone 2 as 'Development is Appropriate'

Climate change allowance for peak river flow for the site is as follows:

Aire and Calder Management Catchment peak river flow allowances (based on central range given site is in Flood zone 2 and less vulnerable.

2020s	11%
2050s	13%
2080s	23%

A search on the Flood Warning Information Service revealed the following:

- That the development site is very low risk of surface water flooding.

Very low risk means that each year this area has a chance of flooding of less than 0.1%.

- Reservoir flooding is considered highly unlikely
- There is no risk of ground water flooding on the site.

4.0 Managing and Mitigating Flood Risk

- The structure will have a concrete base.
- Steel structure and coated steel cladding.
- There will be no internal finishes below 600mm.
- Timber sheeting needed to mount fixtures and fitting will have minimum height of 600mm above finished floor level.
- All electrical fixtures and fittings will be positioned at a minimum of 600mm above finished floor level.
- A SuDS drainage system has been included in the design so as to not increase surface run off. The system has been sized to accommodate potential future increases in peak rain fall intensity as per the information from the Environment Agency shown in table 1 below:

'Table 1: peak rainfall intensity allowance in small catchments (less than 5km²) or urban drainage catchments (based on a 1961 to 1990 baseline)

Applies across all of England Total potential change anticipated for the '2020s' (2015 to 2039) Total potential change anticipated for the '2050s' (2040 to 2069) Total potential change anticipated for the '2080s' (2070 to 2115)

Upper end	10%	20%	40%
Central	5%	10%	20%

5.0 Conclusions

The investigation has concluded that the development is a less vulnerable development and is in Flood zone 2. Such proposals are deemed 'Development is appropriate' in the Planning Practice Guidance.

Investigations show that the development site is at 'very low risk' from surface water flooding, reservoir flooding is very unlikely and there is no risk of ground water flooding.

The proposal includes a SuDS drainage system so that surface water run off to the wider catchment is not increased.

This report therefore demonstrates that the proposed development is not at significant flood risk and will not increase flood risk to the wider catchment.

6.0 Appendice

Environment Agency – Flood Map for Planning
Flood Warning Service Search Results
Flood Warning Service Search Results Map